

# PATENT ABSTRACTS OF JAPAN

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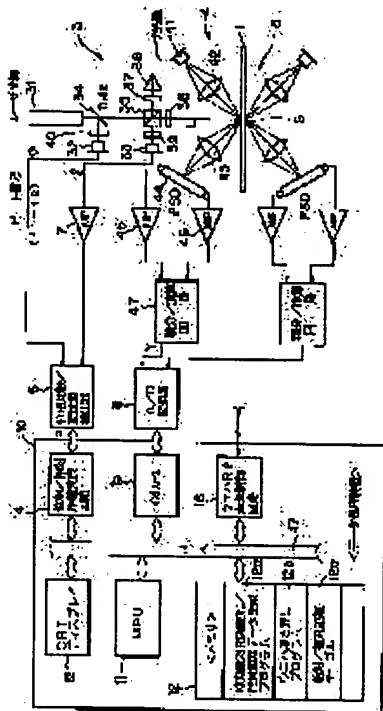
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## (54) WAFER THICKNESS MEASURING EQUIPMENT



(57)Abstract:

**PROBLEM TO BE SOLVED:** To measure the wafer thickness exceeding the wavelength of light in an optical heterodyne interference measuring unit for measuring the wafer thickness by employing a sample piece having a known thickness equivalent to the wafer being arranged at a position corresponding the height position of the wafer and at a specified angle corresponding to flexure of the wafer.

**SOLUTION:** The equipment for measuring the thickness of a wafer 1 comprises an optical heterodyne interference measuring unit 3, and absolute distance detectors 4, 5. A sample piece, e.g. a wafer piece, is measured at a plurality of points and detection values from the absolute distance detectors 4, 5 are stored in correspondence with the measurements of displacement, i.e., the relative distance measurements, from the optical heterodyne

interference measuring unit 3. When the thickness of the wafer 1 is measured, detection values from the absolute distance detectors 4, 5 are obtained at a measuring point having a surface rear height face within the height range of a sample piece from which the corresponding measurements are obtained. The detection values can be expressed in terms of relative displacement data with reference to the corresponding data and the thickness can be determined according to a specified method.

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